

***Vaccinium angustifolium* - *Sorbus americana* / *Sibbaldiopsis tridentata* Dwarf-shrubland**

COMMON NAME	Northern Lowbush Blueberry - American Mountain-ash / Mountain-cinquefoil Dwarf-shrubland
SYNONYM	Blueberry Granite Barrens
PHYSIOGNOMIC CLASS	Dwarf-shrubland (IV)
PHYSIOGNOMIC SUBCLASS	Deciduous dwarf-shrubland (IV.B)
PHYSIOGNOMIC GROUP	Cold-deciduous dwarf-shrubland (IV.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (IV.B.2.N)
FORMATION	Caespitose cold-deciduous dwarf-shrubland (IV.B.2.N.a)
ALLIANCE	VACCINIUM (ANGUSTIFOLIUM, MYRTILLOIDES, PALLIDUM) DWARF-SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Terrestrial

RANGE

Acadia National Park

This association occurs primarily on summits of Mount Desert Island and high rocky headlands of Isle au Haut.

Globally

This association is found in Connecticut, Massachusetts, Maine, New Hampshire, New York, Ontario, Pennsylvania, and Vermont.

ENVIRONMENTAL DESCRIPTION

Acadia National Park

Summits and high upper slopes, all but one sample above 200 m and most above 350 m. Slopes are gentle, 5-15%. All occur on granitic bedrock, with "soils" consisting of weathered sand or gravel a few cm deep. Peat forms in some pockets and provides a substrate for much of the vegetation. Elevation and exposure, rather than fire, is the determining factor for this vegetation, and it occurs in areas both inside and outside of the 1947 fire area.

Globally

This association of northern or high-elevation acidic rock outcrops or summits occurs on rocky ridges, outcrops and summits. Soils are shallow, well-drained, dry, acidic, coarse sands. Significant exposed bedrock is typical, with minimal soil development restricted to crevices or shelter areas. Elevations of known examples range from almost sea level on the Maine coast to about 2700 feet. Ground cover is mainly exposed bedrock.

MOST ABUNDANT SPECIES

Acadia National Park

<u>Stratum</u>	<u>Species</u>
Short Shrub	<i>Nemopanthus mucronata</i> , <i>Viburnum nudum</i> , <i>Ilex verticillata</i> , <i>Acer rubrum</i> , <i>Picea rubens</i>
Dwarf Shrub	<i>Vaccinium angustifolia</i> , <i>Kalmia angustifolia</i> , <i>Gaylussacia baccata</i> , <i>Photinia melanocarpa</i> , <i>Alnus viridis</i> , <i>Vaccinium vitis-idaea</i> , <i>Sorbus americana</i> , <i>Nemopanthus mucronata</i> , <i>Rhododendron canadense</i>
Herbaceous	<i>Sibbaldiopsis tridentata</i> , <i>Deschampsia flexuosa</i> , <i>Cornus canadensis</i> , <i>Solidago randii</i> , <i>Danthonia spicata</i> , <i>Maianthemum canadense</i> , <i>Hypericum gentianoides</i> , <i>Minuartia glabra</i> , <i>Trichophorum cespitosum</i>
Non-vascular	<i>Polytrichum piliferum</i> , <i>Grimmia</i> spp., <i>Cladonia sylvatica</i> , <i>Sphagnum girgensohnii</i> , <i>Cladonia</i> spp.

Globally

<u>Stratum</u>	<u>Species</u>
Dwarf Shrub	<i>Vaccinium angustifolium</i> , <i>Vaccinium myrtilloides</i> , <i>Comptonia peregrina</i> , <i>Gaylussacia baccata</i> , <i>Arctostaphylos uva-ursi</i> , <i>Kalmia angustifolia</i>
Herbaceous	<i>Deschampsia flexuosa</i> , <i>Danthonia spicata</i> , <i>Carex pensylvanica</i> , <i>Carex lucorum</i> , <i>Oryzopsis pungens</i> , <i>Sibbaldiopsis tridentata</i> , <i>Maianthemum canadense</i> , <i>Gaultheria procumbens</i> , <i>Trientalis borealis</i> , <i>Pteridium aquilinum</i>
Non-vascular	<i>Polytrichum commune</i> , <i>Polytrichum juniperinum</i> , <i>Dicranum polysetum</i> , <i>Cladonia</i> lichens

CHARACTERISTIC SPECIES

Acadia National Park

Globally

USGS-NPS Vegetation Mapping Program

Acadia National Park

VEGETATION DESCRIPTION

Acadia National Park

A summit vegetation complex consisting of patches of bare rock (*Rhizocarpon* or other crustose lichens), patches of dwarf heath shrub vegetation with widely scattered *Picea rubens* or *Abies balsamea* (rarely *Quercus rubra*) trees (mapped as BB), and patches of dense taller non-heath shrubs with scattered stunted conifers over a heath shrub understory (mapped as MSS). The blueberry (BB) subtype consists of patches of *Vaccinium angustifolium* or *Gaylussacia baccata*, with lesser amounts of *Kalmia angustifolia* and *Photinia melanocarpa*, and sometimes *Vaccinium vitis-idaea*. The primary herbs, which can form the dominant vegetation in patches among the shrubs, are *Sibbaldiopsis tridentata* and *Deschampsia flexuosa*. *Minuartia glabra* is locally common on bare rock patches at the edges of shrub areas. Frequent herbs include *Cornus canadensis*, *Solidago randii*, *Danthonia spicata*, *Maianthemum canadense*, and *Hypericum gentianoides*. *Trichophorum cespitosum* can dominate locally in shallow rock basins where moisture accumulates. On some summits, this patchy dwarf shrub - bare rock vegetation is punctuated by areas of mixed summit shrubland (MSS), where *Nemopanthus mucronata*, *Viburnum nudum*, and/or *Ilex verticillata* form a 1 - 2 m tall shrub layer with scattered *Abies balsamea*, *Acer rubrum*, *Betula papyrifera*, or *B. populifolia*. The heath shrub and herb layers under these shrubs are similar in composition to that in the blueberry subtype. Composition of the bryoid layer is variable as in the blueberry subtype, except that the mixed summit shrubland subtype generally has *Sphagnum girgensohnii*, absent from the more exposed areas.

The basal area ranged from 1 - 10 m²/ha. Canopy heights were none - 8 m

Globally

Physiognomy of this community is quite variable, ranging from woodland to shrubland to sparsely vegetated rock. A tree canopy is absent or poorly developed and may include *Picea rubens*, *Abies balsamea*, *Quercus rubra*, *Pinus strobus*, *Betula papyrifera*, *Betula papyrifera* var. *cordifolia*, or various other species. Scattered tall shrubs may include *Sorbus americana*, *Viburnum nudum* var. *cassinoides*, *Nemopanthus mucronatus*, *Aronia melanocarpa*, or *Amelanchier* spp. Dwarf heath shrubs are prominent, including *Vaccinium angustifolium*, *Vaccinium myrtilloides*, *Comptonia peregrina*, *Gaylussacia baccata*, *Arctostaphylos uva-ursi*, and *Kalmia angustifolia*. The sparse herb layer includes graminoids, such as *Deschampsia flexuosa*, *Danthonia spicata*, *Carex pensylvanica*, *Carex lucorum*, and *Oryzopsis pungens*, and the forbs *Sibbaldiopsis tridentata*, *Solidago simplex* var. *randii*, *Maianthemum canadense*, *Gaultheria procumbens*, *Trientalis borealis*, *Pteridium aquilinum*. Abundant mosses and lichens form a bryophyte layer characterized by *Polytrichum commune*, *Polytrichum juniperinum*, *Dicranum polysetum*, and *Cladonia* lichens.

OTHER NOTEWORTHY SPECIES *Vaccinium boreale* occurs locally at some sites.

CONSERVATION RANK G?

DATABASE CODE CEGL005094

COMMENTS

Acadia National Park

The expression of the this type varies from summit to summit (at least in mappable units). Distribution of vegetated vs unvegetated patches is variable within sites. Among sites, the dominant species are quite consistent although associates vary.

This type grades downslope into the birch scrub subtype of the aspen - birch woodland complex {*Populus (tremuloides, grandidentata)* - *Betula (populifolia, papyrifera)* Woodland}. As tree cover increases, it can also grade into pitch pine woodlands or other conifer woodland types.

Globally